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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,949	05/03/2001	Guillermo C. Bazan	1279-325-10014591	8500

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/07/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,949

Applicant(s)

BAZAN ET AL.

Examiner

Camie S Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 5, 8, 9, 12 and 15-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 10, 11, 13, 14 and 22-24 is/are rejected.
- 7) ☐ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of group I, drawn to a tetrahedral compound and thin-film electronic device containing a tetrahedral compound has been acknowledged. Additionally, applicant's election of tetraphenylsilane as the tetrahedral junction has been acknowledged. Therefore, claims 5, 8-9, 12 and 15-21 are non-elected claims and are withdrawn from consideration at this time.
2. Examiner acknowledges applicant's election of formula II for R1-R4 from all of the possibilities listed in claim 10 which does not include X, Y, Z or M. Although the applicant did not elect species in claim 10 that contain X, Y, Z or M, please note that formulas XLV-LVII contain X, Y, and Z where X and Y can be NR and NR' and Z can be OR or OR'. Oxygen is divalent; however the substituents listed in claim 10 would make oxygen trivalent. Additionally, nitrogen is trivalent. The substituents listed in claim 10 would have nitrogen with four bonds.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-4, 6, 10-11, 14 and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Oldham, WO 00/03565.

Oldham discloses an organic light emitting device comprising of a first electrode, a second electrode and an organic layer disposed between the first and second electrode wherein the organic layer comprises organic compounds with tetrahedral core structures as per instant claims 1, 13 and 22-23 (see abstract). The reference also discloses that the tetrahedral core structures contain aromatic amine side groups, symmetrical tetrahedral core structures, and symmetrical tetrahedral core structures with aromatic amine side groups as per instant claims 2-4 (see abstract). Claim 32 of the reference discloses that the tetrahedral junction can be tetraphenylsilane as per instant claims 6 and 11. The first compound listed on page 10 of the reference reads on formulas XXV-XXVIII of instant claim 10 when $n=1$. The formulas on line 15 of the reference read on instantly claimed formula XXIV of claim 10. Additionally, Oldham discloses in claim 36 that the organic compounds with tetrahedral core structures comprise at least one hole-transport layer and at least one electron transport layer as per instant claim 14 and 24.

5. Claims 1-4 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Oldham et al., J. of the American Chemical Society, 1998, 120.

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Oldham discloses organic material in a variety of optoelectronic devices mostly used as the light-emitting layer in light-emitting diodes. The reference also discloses a tetrahedral array of four stilbenoid units coupled to a central sp^3 -hybridized carbon atom (see entire document and formulas (2) and (4)). The reference meets all the limitations in claims 1-4 and 22.

6. Claim 7 is objected to regarding the elected species only. The remaining compounds of claim 7 will be searched for with the remaining groups.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the Group are (703) 872-9310 {before finals} and (703) 872-9311 {after finals}.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

